Offering HIV Prophylaxis Following Sexual Assault

Recommendations for the State of California

Prepared by:
Joan E. Myles, JD, MA and Joshua Bamberger, MD, MPH
Housing and Urban Health of the
San Francisco Department of Public Health and
The California HIV PEP after
Sexual Assault Task Force
in conjunction with
The California State Office of AIDS

2001

Offering HIV Prophylaxis Following Sexual Assault:

Recommendations for the State of California

Prepared by:
Joan E. Myles, JD, MA and Joshua Bamberger, MD, MPH
Housing and Urban Health of the
San Francisco Department of Public Health and
The California HIV PEP after
Sexual Assault Task Force
in conjunction with
The California State Office of AIDS

2001

Table of Contents

For further information contact:

Joshua D. Bamberger, MD, MPH
Medical Director, Housing and Urban Health
San Francisco Department of Public Health
101 Grove St., Rm. 407
San Francisco, CA 94102
Tel: 415-554-2664
Fax: 415-554-2770
E-mail: josh_bamberger@dph.sf.ca.us

Preface

Beginning in October 1997, the San Francisco Department of Public Health, in conjunction with the University of California, San Francisco Division of AIDS, began offering HIV postexposure prophylaxis (PEP) following non-occupational exposure as part of a National Institute of Health (NIH) funded feasibility study. In preparing to offer anti-retroviral therapy and counseling to individuals potentially exposed to HIV following consensual sexual exposure, we were concerned that individuals would attempt to access this service following non-consensual sexual exposure. The non-occupational PEP study was not structured to handle the specific needs of assault survivors. The counseling protocol that we developed for our non-occupational PEP study focused on helping individuals develop skills that would reduce their risk of exposure to HIV. The counseling protocol was not designed to offer the essential post-traumatic and recovery counseling that serves as the cornerstone of medical care for survivors of sexual assault. In order to provide the same level of medical care to survivors of sexual assault as to people potentially exposed to HIV following consensual sex, we trained the Sexual Assault Nurse Examiners (SANEs) of the San Francisco Rape Treatment Center to provide pre- and post-HIV test counseling and HIV PEP to all survivors of sexual assault in San Francisco.

Between October 1998 and April 2000, over 200 rape survivors were offered HIV PEP in San Francisco, with approximately one-third initiating anti-retroviral medications. During that same period of time, we received numerous calls from around the state of California from medical providers and from sexual assault survivors requesting information about HIV PEP after sexual assault. It quickly became clear that each local jurisdiction in California had developed unique policies for PEP after sexual assault. Penal Code Section 13823.5 *et seq* mandates each county to develop protocols providing medical care for survivors of sexual assault. However, the medical services offered vary greatly from county to county.

This disparity in services often created challenges for those of us answering calls on the PEP counseling line. Survivors and practitioners who called from San Francisco or Los Angeles were able to access PEP services. However, people who were assaulted in more rural counties did not have access to this service. This disparity in service created an inequity that had little logic and was not based on science but on resources available in local jurisdictions. In an attempt to rectify this disparity in care for survivors of sexual assault in California, the San Francisco Department of Public Health applied for funding support from the State Office of AIDS through the California HIV Planning Group (CHPG) to develop California State Guidelines for HIV PEP after sexual assault.

Prior to developing statewide guidelines for PEP after sexual assault, we surveyed each county to determine the local policy on PEP after sexual assault. In addition, we collaborated with the Alameda County Sexual Assault Response Team that had collected data on the rate of HIV among convicted sex offenders. We then collected background material from published articles on HIV PEP after occupational exposure and after non-occupational exposure. Particularly, we relied upon the New York State AIDS Institute's document "HIV Prophylaxis Following Sexual Assault: Guidelines for Adults and Adolescents."

Finally, upon completion of the background research we assembled a panel of experts, described below, to establish California guidelines. The experts were drawn from a variety of backgrounds and they were expected to be knowledgeable about the issues involved in PEP after sexual assault. The advisory panel met for one day. The findings of that meeting are presented below in the form of California guidelines for PEP after sexual assault.

The Guidelines below were developed with the goal of providing information and support to providers of sexual assault treatment in California so that HIV PEP can be integrated into the medical care offered to sexual assault survivors throughout the State.

Joshua Bamberger, MD, MPH
Medical Director, Urban Community Health
San Francisco Department of Public Health

Introduction

In 1998, 2 out of every 1000 individuals in the United States were raped[1] and 9,777 cases of forcible rape were reported in the State of California.[2] The rate of forcible rape per 100,000 individuals in the State of California was 29.2. The rate ranged from 15.1 in Marin County to 55.8 in Shasta County.[3]

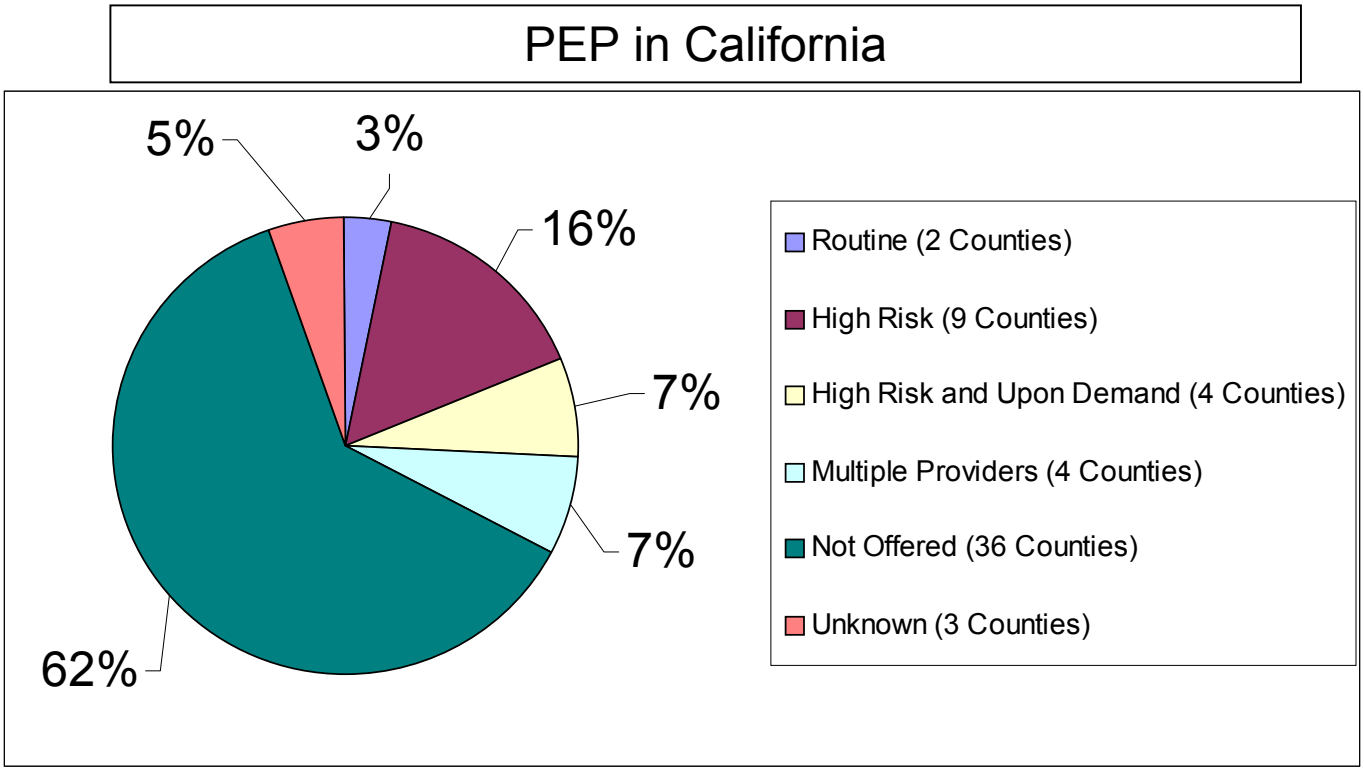
The State of California requires every county to provide counseling and medical services for survivors of sexual assault. Most counties utilize volunteer lay advocates to assist survivors with recovery from the trauma of sexual assault and to advocate for survivors negotiating the medical system. Medical care routinely involves screening and testing for sexually transmitted diseases (STDs) such as gonorrhea, chlamydia, and syphilis, as well as collection of forensic evidence. Most survivors choose to initiate criminal proceedings and to file a police report. However, medical services following sexual assault are available whether or not the survivor chooses to involve the criminal justice system.

Following sexual assault, among the survivor's primary concerns is the possibility of exposure to STDs from the assailant. In California, because each county maintains autonomy over much of the structure and content of their rape treatment, care providers in each county respond differently to survivors' concerns regarding STDs. One of the major concerns of survivors following the assault is exposure to human immunodeficiency virus (HIV).[4] Despite the fact that HIV transmission is a major concern of survivors, rape treatment providers in California inconsistently offer HIV risk assessment information and counseling for survivors of sexual assault.

In San Francisco, a program established in 1997 offering PEP following *consensual* sexual exposure[5] began receiving requests for PEP in cases of sexual assault. Thus, while programs were in place that offered PEP to individuals potentially exposed to HIV from either occupational exposure or consensual sexual exposure, no program existed in the State of California that uniformly and routinely offered PEP to survivors of sexual assault. Like occupational exposures, sexual assault exposures occur generally as isolated incidents, unlikely to recur. Because sexual assault is so common in our society, a statewide protocol ensuring quick access to PEP was needed.

Background

Offering PEP with antiretroviral (ART) medication is the standard of care after occupational exposure to HIV.[6] Since a program began in San Francisco in 1997, the Centers for Disease Control and Prevention (CDC) have acknowledged that PEP may be offered as a part of post-sexual assault treatment.[7] The New York State Health Department has developed recommendations that all survivors of sexual assault be tested for HIV and recommended HIV PEP,[8] despite the unproven efficacy of HIV PEP after sexual exposure.[9] A survey of the 58 counties in California conducted in early 2000 reveals that PEP is not offered after sexual assault in approximately two-thirds of the counties in California.



In counties that do offer PEP following sexual assault, policies vary greatly. In 3 percent of the counties, PEP is routinely offered. In 16 percent of the counties PEP is offered in cases in which the examiner finds evidence of high risk of exposure. In an additional 7 percent of the counties, PEP is offered in both high risk situations and when the sexual assault survivor requests PEP. In another 7 percent of the counties, multiple facilities provided sexual assault services and the PEP policies of each provider differ.

The great disparity in availability of PEP in California is due mostly to the lack of information and guidance available to treatment providers. In response to the great variance in policy surrounding offering PEP following sexual assault and to providers' frustration at the lack of guidance in this area, the California State Office of AIDS funded an advisory panel (the "advisory panel") to create statewide standards. The advisory panel (see Appendix A), composed of HIV specialists, sexual assault treatment providers,

AIDS program coordinators, and a representative from a survivor advocacy group, convened on April 10, 2000.

The advisory panel created a set of standards based upon current medical knowledge. Though cost and other implementation issues are important factors in the ability to offer PEP throughout the State, the panel was directed to focus on developing medical and counseling standards of HIV PEP after sexual assault. The panel also provided examples of funding and implementation strategies utilized by various county sexual assault treatment providers but recommended that each county develops protocols to address implementation specific to the resources available. A sub-committee of the advisory panel (see Appendix A), composed of medical HIV experts, established recommendations regarding medications and accompanying laboratory tests.

Organization of HIV PEP after Sexual Assault Recommendations

The recommendations below are organized in a manner based upon the New York State Guidelines. Each section begins with a simple recommendation that is then followed by the rationale behind that recommendation. The goal of this organizational strategy is to provide a quick guide for individuals providing medical care following sexual assault as well as a comprehensive document supporting the recommendations of the advisory committee.

Offering HIV Prophylaxis Following Sexual Assault In California

Recommendation Regarding Timing:

In cases where PEP is appropriate, PEP should be offered as soon as possible to the survivor. In no case should PEP be offered after 72 hours following the assault.

It is biologically possible that PEP medications taken soon after exposure to HIV can prevent HIV infection. There is limited evidence available to suggest that antiretroviral medications are efficacious when taken prophylactically. In particular, one study of PEP following occupational exposure to HIV showed an 81 percent reduction in risk of seroconversion when medications were started, on average, 4 hours after exposure.

Animal studies suggest that PEP is most beneficial when taken within 1-2 hours of exposure to HIV.[10] While the animal studies show that PEP is not likely to be effective when initiated later than 24-36 hours following the exposure, and not effective after 72 hours[11] there is no definitive answer as to the interval during which PEP may be beneficial in humans.

The advisory panel recommends offering PEP to survivors presenting within 72 hours after the assault. The CDC's Hospital Infections Director has recommended that PEP be initiated within 72 hours for individuals with recent sexual exposure to HIV[12] and San Francisco's non-occupational PEP service uses 72 hours as its cut-off. In the sexual assault context, given the delay that commonly occurs between assault and medical treatment, the advisory panel recommends setting the cut-off for treatment initiation at the outermost acceptable limit.

For individuals that seek out medical care more than 72 hours following the potential exposure to HIV, the advisory group recommends that providers offer HIV antibody testing as well as pre- and post-test counseling. Follow-up testing and counseling is recommended at 8 and 14 weeks. If a survivor tests HIV antibody positive on follow-up testing, appropriate referral to an HIV specialist should be expedited to potentially initiate early intervention treatment. Follow-up testing could be offered as part of primary care follow-up or at a local confidential or anonymous testing site.

Recommendation Regarding Age of Survivor:

An individual must be 12 years of age or older in order to be eligible to receive PEP using the following recommendations. A pediatric HIV specialist should be consulted when a child younger than 12 presents with possible exposure to HIV from a sexual assault.

Medical providers treat individuals 12 years of age and older for STDs such as gonorrhea, chlamydia, and syphilis. The advisory panel recommends that the same age be used as a cut-off for PEP treatment. For individuals less than 12 years old who have potentially been exposed to HIV, a pediatric HIV specialist should be consulted in determining whether PEP is indicated. For children younger than 12 years old, the child's parent(s) or legal guardian(s) should be contacted and included in the discussion whether to initiate PEP.

Recommendations Regarding Consideration of Act(s) of Assault:

When deciding whether to offer PEP, categorize the act of assault into 1 of 3 categories:

1) acts with *measurable risk* of HIV transmission; 2) acts with *possible risk* of HIV transmission, or 3) acts with *no risk* of HIV transmission.

Not all acts of assault warrant PEP. Based upon the best available epidemiological data, the risk of contracting HIV from one act of unprotected consensual anal sex with a known HIV positive partner is approximately 0.3 – 5 percent.[13] The risk of contracting HIV from one act of unprotected consensual vaginal sex with an HIV positive partner is approximately 0.1 percent. [14] Some acts of assault, however, carry no risk of HIV transmission and, therefore, do not warrant PEP. When deciding whether to offer PEP, categorize the act of assault into 1 of 3 categories:

1. Acts with *measurable risk* of HIV transmission, including anal penetration, vaginal penetration and injection with a contaminated needle; or

2. Acts with *possible risk* of HIV transmission, including oral penetration with ejaculation, unknown act, contact with other mucous membrane, victim biting assailant, and assailant with bloody mouth biting victim; or

3. Acts with *no risk* of HIV transmission, including kissing; digital or object penetration of vagina, mouth or anus; and ejaculation on intact skin.

Recommendations Regarding Consideration of Assailant's HIV Status

As a part of the determination of whether to offer PEP to a survivor, it is necessary to consider the assailant's history. The assailant's HIV status can be divided into 3 categories: 1) known HIV-positive assailant; 2) assailant with known or suspected risk factors; and 3) unknown assailant or an assailant with unknown risk factors.

Past or present intravenous drug users, commercial sex workers, men who have sex with men, individuals with multiple sex partners, and individuals with either prior convictions for sexual assault or prior prison incarceration all fall into the high risk category.

Because HIV is rarely transmitted by sexual assault in the United States,[15] information concerning potential increased risk of transmission is useful when considered in conjunction with the type of assault and other risk factors. Although the decision whether to initiate PEP cannot be made by solely considering the perpetrator's HIV status, the more information known about the details of the assault, the better known the risk of HIV transmission.

Recommendations Regarding Consideration of Other Factors

When deciding whether to offer PEP, consider if any of the following factors were present during the assault: presence of blood; survivor or assailant with a sexually transmitted disease with inflammation such as gonorrhea, chlamydia, herpes, syphilis, bacterial vaginosis, trichomoniasis, etc.; significant trauma to survivor; ejaculation by assailant; multiple assailants or multiple penetrations by assailant(s).

The specific circumstances of each assault influence the likelihood of HIV transmission following the assault. The presence of the above factors creates higher risk of contracting HIV for the survivor. Each additional factor present raises the risk of HIV transmission.

Rationale Behind Recommendations and Language Used

The literature concerning PEP following occupational exposure, as well as the CDC's recommendations for PEP following occupational exposure, take into account the many details of the exposure. Specifically, the CDC recommendations consider the type of bodily fluid involved in the exposure as well as the route and severity of the exposure. The CDC recommendations also consider the source of the possible exposure and make different recommendations depending on whether the source patient is known to be HIV positive, HIV negative or of unknown serostatus. The CDC suggests that PEP decisions be individualized so as to account for various risk scenarios.[16]

The advisory panel bases the recommendations for PEP following sexual assault upon the CDC's recommendations for PEP following occupational exposure, specifically the idea of basing each decision to offer PEP upon the details of each assault. The decision to offer PEP will depend upon the type of assault, the assailant's status and other risks present.

The advisory panel's recommendations distinguish between "recommending" PEP and "offering" PEP to survivors. In cases with no apparent risk of HIV transmission, the advisory panel recommends that medical providers not offer PEP to survivors. In these cases, PEP medications have side effects whose harm can outweigh any potential benefit to the survivor. By offering PEP, rather than recommending PEP, to survivors in situations with low but possible risk of HIV transmission, medical providers allow survivors some autonomy over their medical treatment.

When the medical provider offers or recommends PEP, the provider should clearly explain the possible benefits and side effects of taking the medications. The provider should also explain the lack of definitive answers regarding the medications' efficacy in preventing HIV transmission. It is plausible that the survivor will not be able to process the information or make a truly informed decision in the stressful post-assault period.

Given the short time period following the assault during which the advisory panel recommends starting PEP, when a survivor is unable to decide whether to initiate PEP, the provider should encourage the survivor to begin the medications immediately. The survivor may discontinue the medications at any time.

It is important to consider PEP medications as one important part of the larger post-assault treatment program. Specialized counseling is another critical aspect of the post-assault treatment.

Quick Guide to Offering HIV PEP

1. Has less than 72 hours passed since the assault occurred?
   a. If no, do not offer PEP but recommend baseline and follow-up HIV antibody testing.
   b. If yes, continue risk analysis.
2. Is survivor 12 years of age or older?
   a. If yes, continue risk analysis.
   b. If no, consult pediatric HIV specialist (who must be identified in advance).
3. What is the risk of HIV transmission from the assault?
   a. Was the assault one with measurable risk of HIV transmission, such as an assault with anal penetration, vaginal penetration, or injection?
   b. Was the assault one with possible risk of HIV transmission, such as oral penetration with ejaculation, an assault involving other mucous membranes (e.g. eyes), an unknown assault, an assault in which the survivor bit the assailant or the assailant with a bloody mouth bit the survivor?
   c. Was the assault one with no risk of HIV transmission, such as kissing; digital or object penetration of vagina, mouth or anus; ejaculation on intact skin; or an assault in which a condom was used?
   d. What other risk factors were present in the assault, including presence of blood, survivor or perpetrator with STD, significant trauma to survivor, ejaculation by assailant, multiple assailants or multiple penetrations by assailant(s)?
4. Is the assailant's HIV status known?
   a. If known HIV negative, do not offer PEP.
   b. If known HIV positive,
      - Recommend PEP if assault with measurable risk of HIV transmission has occurred.
      - Recommend PEP if assault with possible risk of HIV transmission has occurred and at least one additional risk co-factor was present in assault.
      - Offer PEP if assault with possible risk of HIV transmission has occurred with no additional risk co-factors present.
      - Do not offer PEP for exposures carrying no risk.

5. Does the assailant engage in behaviors that put him/her at risk for contracting HIV? High risk groups include men who have sex with men, past or present injection drug users, commercial sex workers, individuals with multiple sex partners, individuals with prior convictions for sexual assault, and individuals with a history of prison and/or jail incarceration.
    a. If known or suspected risk factors exist,
        - Recommend PEP if assault with measurable risk of HIV transmission has occurred.
        - Recommend PEP if assault with possible risk of HIV transmission has occurred and more than one additional risk co-factor was present in assault.
        - Recommend *or* offer PEP if assault with possible risk of HIV has occurred and only one additional risk co-factor was present in assault.
        - Offer PEP if assault with possible risk of HIV transmission has occurred with no additional risk co-factors present.
        - Do not offer PEP for exposures carrying no risk.
    b. If assailant is not known and/or if assailant's risk factors are unknown,
        - Offer PEP if assault with measurable risk of HIV transmission has occurred.
        - Offer PEP if assault with possible risk of HIV transmission has occurred and more than one additional risk co-factor was present in assault.
        - Offer PEP if assault with possible risk of HIV has occurred and only one additional risk co-factor was present in assault.
        - Offer *or* do not offer PEP if assault with possible risk of HIV transmission has occurred with no additional risk co-factors present.
        - Do not offer PEP for exposures carrying no risk.

Offering PEP After Sexual Assault

Act	Source		
	Known HIV+	**Known or Suspected Risk Factors**	**Unknown Risk Factors or Unknown Assailant**
Measurable Risk	R	R	O
Possible Risk and more than 1 co-factor	R	R	O
Possible risk and 1 co-factor	R	R/O	O
Possible risk and 0 co-factors	O	O	O/N
No risk	N	N	N

Key
R = Recommend
O = Offer
N = Do Not Offer

Other Considerations

Recommendations Regarding Structuring PEP Program

Each California county provides rape treatment services at specified hospital(s) (see Appendix B). Given the great diversity in county communities and populations, the structure and hierarchy of post-sexual assault treatment providers vary from county to county. Some counties, particularly the more densely populated counties, employ a dedicated group of Sexual Assault Nurse Examiners (SANE) to conduct the forensic exams. In other counties, emergency department physicians conduct the forensic exams and provide the initial treatment following the assault.

When implementing the PEP Following Sexual Assault Program, each county should identify existing resources in the county, both personnel and monetary. The recommendations do not seek to create one single acceptable structure for post-rape treatment, but rather, to list recommended components of the HIV prevention aspect of the program.

Recommendations Regarding Antiretroviral Medications Offered

In the majority of cases of sexual assault, the HIV status of the assailant is unknown. In this situation, the advisory committee recommends that after a thorough discussion of the possible risks and benefits of PEP, survivors be offered two antiretroviral medications in combination to be given for 28 days of treatment. This recommendation follows the CDC's recommendation for PEP following occupational exposure. The only published study of the efficacy of PEP is in the occupational setting and the medication offered was zidovudine alone for 28 days. Since the time of that study, the rate of zidovudine resistance in the community of HIV-infected people has risen significantly. Therefore, if PEP is elected, the advisory committee recommends the use of zidovudine in combination with another antiretroviral such as lamivudine. The advisory committee does not routinely recommend the use of a third antiretroviral such as a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor, although there are circumstances where such agents may be indicated. The simplest regimen that meets the goals of providing two nucleoside analog antiretrovirals, (one of which is zidovudine), is zidovudine (300mg) in combination with lamivudine (150mg) in a combination pill (Combivir) to be taken twice a day for 28 days. Dosing of Combivir is twice a day rather than every 12 hours and can be taken with or without food, though taking with food can reduce some of the gastrointestinal side effects. Alternative combinations include lamivudine plus stavudine (40 mg stavudine twice a day for a person weighing >/= 60 kg; 20 mg twice a day for a person weighing < 60 kg; 150 mg lamivudine twice a day for body weight >/= 50 kg, 2mg/kg of body weight twice a day for <50 kg).

When the assailant is known to be HIV positive and known to be antiretroviral experienced, PEP decisions should be made in consultation with an expert in HIV resistance. In principle, a regimen should be offered that provides at least two antiretrovirals to which the assailant's virus is least likely to be resistant, based on the

assailant's antiretroviral treatment and viral load history. In addition, if the assailant is known to be presently taking antiretrovirals and known to have a detectable HIV RNA, three antiretrovirals (the addition of a protease inhibitor plus/minus a non-nucleoside reverse transcriptase inhibitor) should be offered to the survivor with the regimen tailored to having the greatest theoretical likelihood of being beneficial. Such decisions should not be made without expert consultation.

In the majority of cases, if PEP medications are elected, zidovudine (300mg)/lamivudine (150mg) in combination (Combivir) taken twice a day for 28 days is the recommended PEP medication regimen following sexual assault.

The California HIV Planning Group wished to emphasize that triple combination therapy is the standard of care for people infected with HIV and the double therapy in this situation is acceptable because it is used to reduce the likelihood of transmission following exposure to HIV, not to treat established infection.

Survivors who choose to initiate medications should be counseled about the importance of adequate adherence to the regimen. Survivors should be counseled that nausea, fatigue and headache are common side effects of zidovudine/lamivudine. Most side effects result from the zidovudine component of the regimen. Zidovudine can be changed to stavudine if side effects are intolerable. Survivors should seek out care with an identified follow-up provider if these side effects are debilitating rather than discontinue medications prior to completion of the regimen.

Only a limited amount of antiretroviral medications should be dispensed/prescribed initially to ensure that the survivor who initiates medications returns to receive HIV antibody results as soon as they are available. As most hospitals in California can process HIV antibody results in one week, the advisory committee recommends that only 10 days of antiretroviral pills be dispensed initially, with the remainder of the 28 days of medications being prescribed/dispensed upon follow-up. Limiting the number of antiretroviral doses dispensed also encourages survivors to return to discuss side effects and adherence with a trained provider and provides opportunity for further post-sexual-assault counseling. If the unique circumstances of the sexual assault preclude follow-up at the facility where treatment is initiated, the provider of sexual assault treatment should make every effort to identify an appropriate provider to participate in both the counseling and medical follow-up.

Recommendations for Laboratory Examinations

The advisory committee recommends that, other than a baseline HIV antibody test and routine post-sexual assault testing and treatment, no additional laboratory examinations be offered routinely to sexual assault survivors who choose to initiate PEP. Among 401 HIV-negative individuals that enrolled in a study of PEP after consensual sexual exposure to HIV, very few developed laboratory abnormalities during the course of treatment. In addition, those that did develop anemia or liver enzyme elevations had their laboratory values return to baseline following discontinuation of the medications. A careful medical

history should be obtained prior to initiation of HIV PEP. Baseline laboratory tests may be indicated in those with significant medical histories, certain concomitant medications, or current symptoms of systemic illness. The main toxicities of zidovudine are anemia, neutropenia and transaminitis. Stavudine can cause pancreatitis or peripheral neuropathy. Lamivudine is almost never associated with toxicity. If alternative agents are chosen, the provider should ensure they know the drug toxicities and interactions and determine if any baseline laboratory tests should be drawn on a case-by-case basis.

People that do develop fatigue, jaundice, anorexia, or other potential side effects of antiretroviral medications, should be appropriately evaluated by experienced providers at the time the symptoms develop.

All survivors of sexual assault who initiate PEP medications should have an HIV antibody test at the time of the initial evaluation. However, initiating PEP medications should not be predicated upon obtaining an HIV antibody test.

The advisory committee recommends that all people who initiate PEP medications have a baseline HIV antibody test at the initial post-assault evaluation or soon thereafter. It is much more likely that a sexual assault survivor will be HIV positive from exposures occurring prior to the assault than that they will seroconvert from the assault. Therefore, providers of sexual assault treatment must be trained to provide pre- and post-test counseling. If the survivor is unable or unwilling to provide adequate consent to be tested for HIV, an HIV test should be offered as soon as possible after the initial encounter. However, initiating PEP medications should not be delayed by pre-test counseling or a survivor's reluctance to submit to an HIV antibody test.

If a survivor is found to have a positive HIV antibody test, PEP medications should be discontinued and the survivor should be referred to an HIV medical specialist for evaluation. Do not continue two-drug therapy in a survivor with a positive antibody test result.

Goals Related to HIV Issues During Survivor's Initial Meeting with Treatment Team

While a great deal of information will be exchanged at the initial contact between the assault survivor and the treatment team, the goals of the initial meeting remain well-defined.

1. Assessing the survivor's risk of HIV exposure from the assault.
2. Assisting the survivor to make an informed decision whether to have a baseline HIV antibody test and take the PEP medications.
3. Assisting individuals opting to take medications to begin taking them as soon as possible.
4. Assuring that appropriate instructions are provided on dosing, adherence, and side effect management.
5. Arranging for follow-up treatment.

Recommendations for Composition of Treatment Team

The advisory panel recommends providing the survivor with certain helpful information at the survivor's initial presentation following the assault. One individual need not provide each aspect of the information provided. When an individual presents for treatment following an assault, the advisory panel recommends that the treatment team include:

1. an individual able to use the above algorithm to evaluate the risk of HIV transmission given the specific assault details;
2. an individual with prescription-writing authority;
3. an individual who understands, and is able to explain, the risks and benefits of taking anti-HIV medications;
4. an individual who is able to explain the potential short- and long-term side effects of the medications;
5. a consultant who is available for unusual exposure histories and medication recommendations when the assailant's antiretroviral history is known; and
6. an individual who can offer pre- and post- HIV test counseling.

Recommendation for Inclusion of a Rape Crisis Counselor in the Treatment Team

A rape counselor should be present during the entire initial examination and treatment of the assault survivor. The counselor's primary role should be comforting, assisting, providing information to, and advocating for the survivor. The counselor may or may not be someone who is a public health worker. The advisory committee recommends that the counselor be someone outside the public health system who can help coordinate care and assist in decision-making. The counselor can serve as a link between the survivor and other follow-up services.

Recommendations for Treatment Team Training

Any training program to be offered to post-rape treatment teams concerning HIV prophylaxis should include the following:

1. understanding the structure of the advisory panel's protocols;
2. understanding the science behind PEP;
3. understanding the limitations regarding PEP efficacy;
4. understanding risks and modes of HIV transmission;
5. understanding the psychological burdens on the survivor and incorporating that understanding into pre- and post-test HIV antibody testing;
6. understanding the risks and benefits of HIV medications;
7. understanding the legal issues behind HIV testing of the assailant;
8. understanding symptom management of the medication's potential side effects; and
9. familiarity with agencies to refer survivor to for follow-up medical care and counseling.

Recommendations Regarding Timing of PEP Medications

It is the advisory panel's recommendation that HIV PEP medication be given priority and not be delayed by other medications. When determined desirable, HIV PEP medications should be started as soon as possible following a possible exposure to HIV and should not be started after 72 hours following the assault. The advisory panel recognizes that survivors have numerous concerns following an assault. Medical providers often prescribe numerous medications after the assault, including medications to prevent the transmission of various STDs, to prevent pregnancy, and to prevent nausea caused by all of the medications. Furthermore, if the survivor is too overwhelmed by the situation and is therefore unable to make a decision regarding initiating PEP medications, the provider should urge the survivor to initiate the medications. The survivor may stop PEP if she/he later decides not to continue with the medications.

Recommendations Regarding Follow-up Care

Follow-up care should be provided by a single designated medical provider. This provider will offer medical care and referrals and will receive and explain HIV test results.

Recommendations for Testing and Treatment of other Sexually Transmitted Diseases

While prevention of HIV transmission is the primary concern of the advisory panel, the panel recommends prophylactic treatment of other STDs following sexual assault. The survivor should be tested for bacterial vaginosis, trichomoniaisis, chlamydia, gonorrhea, and syphilis. The panel recommends administration of the hepatitis B vaccine to the survivor following the assault.

Recommendations Regarding Cost of HIV Medications

Recognizing that the cost of PEP medications have prevented county rape treatment programs from prescribing HIV PEP medications in the past, the panel recommends that each county seek out the most individually appropriate method of procuring and paying for the medications. Options for sources of payment include county health departments, private donations, Victim Witness Program, law enforcement, and the survivor's private insurance.

Recommendations Regarding Legal Issues

1. Each county should establish a mechanism for providing HIV PEP outside of the legal system. A survivor should not be denied PEP medications if he/she does not wish to pursue legal avenues after the assault and/or does not desire a forensic examination

Recommendations Regarding Implementation of PEP after Sexual Assault Program

1. County Level: A registry has been established by the CDC to collect data on non-occupational PEP use. Counties should work with the CDC PEP Registry in order to further our understanding of the efficacy of PEP following sexual assault. Verbal informed consent is required through most Institutional Review Boards. These issues need to be addressed prior to participation in the registry. For information about the PEP Registry call (877)HIV-1PEP or consult www.hivpepregistry.org

2. State Level: The advisory panel recommends that the State of California Office of AIDS establish a technical support program, including a hotline with ready access to expert information about sexual assault and HIV. This program should also offer comprehensive central or on-site training to county rape treatment programs.

Appendix A:
Advisory Panel Members

Joshua D. Bamberger, M.D., M.P.H.*
Medical Director, Office of Urban Community Health
San Francisco Department of Public Health

Assistant Clinical Professor, Department of Family and Community Medicine
University of California, San Francisco
San Francisco, California

David Bangsberg. M.D., M.P.H.*
Assistant Professor of Medicine
Director of Epidemiology and Prevention Interventions Center
Division of Infectious Diseases and The Positive Health Program
San Francisco General Hospital/University of California, San Francisco
San Francisco, California

S. Lynne Bennett, RNP-C
Women's Health Care Nurse Practitioner
Humboldt County Sexual Assault Response Team
Eureka, California

Andy Handler, M.A.
Senior Health Educator
HIV Education and Prevention Programs
Monterey County Health Department
Monterey, California

Hillary Larkin, P.A.-C
Medical Director, Sexual Assault Response Team
Department of Emergency Medicine
Highland Hospital
Oakland, California

David K. Martin, B.S.N, P.H.N.
AIDS Program Coordinator
Kern County Department of Public Health
Bakersfield, California

Victoria L. Ritter, R.N., M.B.A.
Manager, Emergency Department
University of California Davis, Medical Center
Chair, Sexual Assault Advisory Council
Sacramento, California

Michelle Roland, M.D.*
Assistant Professor of Medicine
UCSF Positive Health Program
San Francisco General Hospital
San Francisco, California

Karen Striplin, R.N.
Nurse Manager
John C. Fremont District Hospital
Mariposa, CA 95338

(* denotes member of medical sub-committee)

Appendix B:
California County Post-sexual Assault Treatment Providers

Alameda County

(< 14 years of age)
Children's Hospital, Oakland
Center of Child Protection
747 52nd Street
Oakland, CA 94609
(510) 428-3742

(14 and older)
Alameda County Medical Center
1411 East 31st Street
Oakland, CA 94602
(510) 437-4261

Alpine County

No hospital in county.

Amador County

Sutter Amador Hospital
810 Court Street
Jackson, CA 95642
(209) 223-7555

Butte County

Enloe Hospital
West 5th Avenue and The Esplanade
Chico, CA 95926
(530) 891-7300

Oroville Hospital
2767 Olive Highway
Oroville, CA
(530) 533-8500

Calaveras County

Mark Twain St. Joseph's Hospital
768 Mountain Ranch Road
San Andreas, CA 95249
(209) 754-3521

Contra Costa County

Contra Costa Regional Medical Center
2500 Alhambra Avenue
Martinez, CA 94553
(925) 370-5170

Doctors' Medical Center
2000 Vale Road
San Pablo, CA 94806
(510) 970-5000

Sutter Delta Memorial Hospital
3901 Lone Tree Way
Antioch, CA 94509
(925) 779-7200

Del Norte County

Sutter Coast Hospital
800 East Washington
Crescent City, CA 95531
(707) 464-8511

El Dorado County

Barton Hospital
2170 South Avenue
South Lake Tahoe, CA 96150
(530) 541-3420

El Dorado County (continued)

Marshall Hospital
Marshall Way
Placerville, CA 95667
(530) 622-1441

Fresno County

University Medical Center
445 South Cedar
Fresno, CA 93602
(559) 459-4000

(Although rape treatment is provided at any hospital in Fresno County except Kaiser, the Sexual Assault Response Team prefers University Medical Center)

Glenn County

Glenn General Hospital
1133 West Sycamore
Willows, CA 95988
(530) 934-1800

Humboldt County

St. Joseph's Hospital
2700 Dolbeer Street
Eureka, CA 95501
(707) 445-8121

Imperial County

Pioneers Memorial Health Care District
207 West Legion Road
Brawley, CA 92227
(760) 351-3333

Inyo County

Northern Inyo Hospital
150 Pioneer Lane
Bishop, CA 93514
(760) 873-5811

Kern County

Bakersfield Memorial Hospital
420 34th Street
Bakersfield, CA 93301
(661) 327-4647

Kern Medical Center
1830 Flower Street
Bakersfield, CA 93305
(661) 326-2000

Kings County

Hanford Community Medical Center
450 Greenfield Avenue
Hanford, CA 93230
(559) 582-9000

Lake County

Red Bud Community Hospital
18th Avenue and Highway 53
Clear Lake, CA 95422
(707) 994-8138

Lassen County

Lassen Community Hospital
560 Hospital Lane
Susanville, CA 96130
(530) 257-5325

Los Angeles County

Antelope Valley Hospital
1600 West Avenue J.
Lancaster, CA
(661) 949-5000

Los Angeles County (continued)

California Hospital
1338 S Hope Street
Los Angeles, CA
(213) 742-5555

Daniel Freeman Hospital
333 North Prairie Avenue
Inglewood, CA
(310) 674-7050

LA County and USC Medical Center
Sexual Assault Center
1240 North Mission Road T-11
Los Angeles, CA
(323) 226-3961

Little Company of Mary
4101 Torrance Boulevard
Torrance, CA
(310) 540-7676

Long Beach Hospital
7901 Walker Street
La Palma, CA
(714) 670-6257

Mission Community Hospital
14850 Roscoe Boulevard
Panorama City, CA
(818) 787-2222

Northridge Hospital
18300 Roscoe Boulevard
Northridge, CA
(818) 885-5300

Pomona Valley Hospital
1798 North Garey Avenue
Pomona, CA
(909) 865-9858

Queen of the Valley Hospital
1115 South Sunset Avenue
West Covina, CA
(626) 962-4011

San Antonio Community
999 San Bernardino Road
Upland, CA
(909) 985-2811

San Gabriel Hospital
438 West Las Tunas Dr.
San Gabriel, CA
(626) 289-5454

Santo Monica-UCSL Medical Center
Rape Treatment Center
1250 16th Street
Santa Monica, CA
(310) 319-4000

Madera County

Madera Community Hospital
1250 East Almond Avenue
Madera, CA 93637
(559) 675-5555

Marin County

Marin General Hospital
250 Bon Air Road
Greenbrae, CA 94904
(415) 925-7000

Mariposa County

John C. Fremont Hospital
5189 Hospital Road
Mariposa, CA 95338
(209) 966-3631

Mendicino County

Mendicino Coast District Hospital
700 River Drive
Fort Bragg, CA 95437
(707) 961-1234

Ukiah Valley Medical Center
275 Hospital Drive
Ukiah, CA 95482
(707) 462-3111

Merced County

Sutter Merced Medical Center
301 East 13th Street
Merced, CA 95340
(209) 385-7100

Modoc County

Modoc Medical Center
228 McDowell Street
Alturas, CA 96101
(530) 233-5131

Mono County

Mammouth Hospital
(South Mono Health Care District)
185 Sierra Park Road
Mammouth Lake, CA 93546
(760) 934-3311

Monterey County

Community Hospital of Monterey
23625 Wr. Holman Highway
Monterey, CA 93942
(831) 625-4900

Natividad Medical Center
1441 Constitution Boulevard
Salinas, CA 93906
(831) 755-4111

Napa County

Queen of the Valley Hospital
1000 Trancas Street
Napa, CA 94558
(707) 252-4411

Nevada County

Sierra Nevada Memorial Hospital
155 Glasson Way
Grass Valley, CA 95945
(530) 274-6000

Tahoe Forest Hospital
10121 Pine Avenue
Truckee, CA 96161
(530) 582-3219

Orange County

Survivors will be seen at any of the 26 ambulance-receiving hospitals. Forensic exams and rape treatment performed at Anaheim Memorial West.

Anaheim Memorial West
1111 West La Palma Avenue
Anaheim, CA 92801
(714) 774-1450

Placer County

Sutter Auburn
11815 Education Street
Auburn, CA 95603
(530) 885-7201

Sutter Roseville
1 Medical Plaza
Roseville, CA 95661
(916) 781-1000

Plumas County

Eastern Plumas Health Care
500 First Avenue
Portola, CA 96122
(530) 832-4277

Plumas District Hospital
1065 Bucks Lake Road
Quincy, CA 95971
(530) 283-2121

Riverside County

Corona Regional Medical Center
800 South Main Street
Corona, CA 92882
(909) 737-4343

Hemet Valley Medical Center
1117 Devonshire Avenue
Hemet, CA 92543
(909) 652-2811

Riverside County Regional
Medical Center
26520 Cactus Avenue
Moreno Valley, CA 92555
(909) 486-4000

Sacramento County

University of California, Davis
Medical Center
2315 Stockton Boulevard
Sacramento, CA 95817
(916) 734-2363

San Benito County

Rape survivors sent to hospitals outside of county. Hazel Hawkins Hospital in Hollister has no rape treatment program.

San Bernardino County

Loma Linda Medical Center
11234 Anderson Street
Loma Linda, CA 92354
(909) 824-0800

San Diego County

Palomar Medical Center
555 East Valley Parkway
Escondido, CA 92025
(760) 739-3300

Pomerado Hospital
15615 Pomerado Road
Poway, CA 92064
(858) 613-4671

Villa View Community Hospital
5550 University Avenue
San Diego, CA 92105
(619) 582-3516

San Francisco County

San Francisco General Hospital
1001 Potrero Avenue
San Francisco, CA 94110
(415) 206-8000

San Joaquin County

San Joaquin General Hospital
500 West Hospital Road
French Camp, CA 95231
(209) 468-6300

San Luis Obispo County

San Luis Obispo General Hospital
2180 Johnson Avenue
San Luis Obispo, CA 93408
(805) 781-4800

San Mateo County

San Mateo County Hospital
222 West 39th Avenue
San Mateo, CA 94403
(650) 573-2222

Santa Barbara County

Santa Barbara Cottage Hospital
Pueblo at Bath Street
Santa Barbara, CA 93105
(805) 682-7111

Santa Clara County

Santa Clara Valley Medical Center
751 South Bascom Avenue
San Jose, CA 95128
(408) 885-5000

Santa Cruz County

Dominican Hospital
1555 Soquel Drive
Santa Cruz, CA 95065
(831) 462-7700

Watsonville Hospital
75 Neilson Street
Watsonville, CA 95076
(831) 724-4741

Shasta County

Mayer Memorial Hospital
43563 Highway 299 East
Fall River Mills, CA 96028
(530) 336-5511

Mercy Medical Center
2175 Rosaline Avenue
Redding, CA 96001
(530) 225-6000

Redding Medical Center
1100 Butte Street
Redding, CA 96001
(530) 244-5400

Sierra County

No hospital in county. Medical clinic located in Downieville.

Siskiyou County

Fairchild Medical Center
444 Bruce Street
Yreka, CA 96097
(530) 842-4121

Mercy Medical Center
914 Pine Street
Mount Shasta, CA 96067
(530) 926-6111

Solano County

Northbay Medical Center
1200 B Gale Wilson Bouldevard
Fairfield, CA 94533
(707) 429-3600

Sutter Solano Medical Center
300 Hospital Drive
Vallejo, CA 94589
(707) 554-4444

Sonoma County

Sutter Medical Center
3325 Chanate Road
Santa Rosa, CA 95404
(707) 576-4040

Stanislaus County

Doctor's Medical Center
1441 Florida Avenue
Modesto, CA 95350
(209) 576-3601

Emmanuel Hospital
825 Delbon Avenue
Turlock, CA 95382
(209) 667-4200

Memorial Hospital Medical Center
1700 Coffee Road
Modesto, CA 95355
(209) 526-4500

Sutter County

Rideout Memorial Hospital
726 4th Street
Marysville, CA 95901
(530) 749-4300

Tehama County

St. Elizabeth Hospital
2550 Sister Mary Columba Drive
Red Bluff, CA 96080
(530) 529-8000

Trinity County

Trinity Hospital
410 North Taylor Street
Weaverville, CA 96093
(530) 623-5541

Tulare County

Kaweah Delta District Hospital
400 West Mineral King Avenue
Visalia, CA 93291
(559) 625-2211

Tuolumne County

Tuolumne General Hospital
101 Hospital Road
Sonora, CA 95370
(209) 533-7100

Ventura County

Ventura County Medical Center
3291 Loma Vista Road
Ventura, CA 93003
(805) 652-6000

Yolo County

Woodland Memorial Hospital
1325 Cottonwood Street
Woodland, CA 95695
(530) 662-3961

Yuba County

Patients seen at Rideout Memorial Hospital in Sutter County.

REFERENCES

[1] Bureau of Justice Statistics, Criminal Victimization: Changes 1997-1998 Trends 1993-1998. NCJ 17653.

[2] Lockyear, B, Crime & Delinquency in California, 1998. California Department of Justice, Division of Criminal Justice Information Services, Table 11. (www.caag.state.ca.us)

[3] *Ibid.*

[4] National Victim Center and Crime Victims Research and Treatment Center. National Women's Study. In: Rape in America: A report to the nation. Charleston: National Victim Center and Crime Victims Research and Treatment Center, Dept. of Psychiatry and Behavioral Sciences, Medical University of South Carolina, 1992.

[5] J. Martin, M. Roland, J.D. Bamberger, M. Katz, J.O. Kahn, T. Coates. Post-exposure prophylaxis after sexual or drug use exposure to HIV: Final results from the San Francisco Post-Exposure Prevention (PEP) Project. *Abstract.* 6th Conference on Retroviruses and Opportunistic Infections, San Francisco, Feb. 2000.

[6] P. Lurie, S. Miller, F. Hecht, M. Chesney, Post-exposure After Nonoccupational HIV Exposure: Clinical, Ethical and Policy Considerations. The Journal of the American Medical Association, November 25, 1998, Vol. 280 No. 20.

[7] Centers for Disease Control and Prevention. Guidelines for Treatment of Sexually Transmitted Diseases. Morbidity and Mortality Weekly Report, 1998;47(RR-1):109-111.

[8] AIDS Institute, New York State Department of Health, HIV Prophylaxis Following Sexual Assault: Guidelines for Adults and Adolescents, 1998.

[9] J. Bamberger, M. Katz, C. Waldo, J. Gerberding; HIV postexposure prophylaxis following sexual assault, American Journal of Medicine, March 1999, 106(3):323-6.

[10] Centers for Disease Control and Prevention. Public Health Service Guidelines for Management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis. Morbidity and Mortality Weekly Report, 1998;47(RR-7);1-28.

[11] H. McClure, D. Anderson, A. Ansari, P. Fultz, S. Klumpp, R. Schinazi. Nonhuman primate models for evaluation of AIDS therapy. In: AIDS: anti-HIV agents, therapies and vaccines. Annals of the New York Academy of Science, 1990;100;616:287-98.

[12] M. Katz, J. Gerberding. The Care of Persons with Recent Sexual Exposure to HIV Annals of Internal Medicine 1998;Vol. 128;No.4:306-310.

[13] V. DeGruttola, G. Seage, K. Mayer, C. Horsburgh Jr. Infectiousness of HIV between Male Homosexual Partners. Journal of Clinical Epidemiology. 1989;42:849-56.

[14] J. Wiley, S. Herschkorn, N. Padian. Heterogeneity in the probability of HIV transmission per sexual contact: the case of male-to-female transmission in penile-vaginal intercours. Statistics in Medicine. 1989;8:93-102.

[15] L. Gostin, Z. Lazzarini, D. Alexander, et al. HIV Testing, Counseling, and Prophylaxis after Sexual Assault. The Journals of the American Medical Association, 1994;271:1436-1444.

[16] Public Health Service Guidelines for the management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis, Morbidity and Mortality Weekly Report, May 15, 1998/47(RR-7);12.